

TROPICAL DISTURBANCES OF OCTOBER 1938

By J. H. GALLENNÉ

[Marine Division, Weather Bureau, Washington, November 1938]

Three tropical disturbances were charted during October in the North Atlantic and the Gulf of Mexico.¹ The first appears to have originated over northern British Honduras on the 10th and, after pursuing an unusual course, moved inland on the 17th a short distance to the southwest of Galveston, Tex. The second disturbance was located a short distance to the northeast of Bermuda on the 17th. It moved southwestward toward the coast of Florida on the 18th and 19th, then recurved to the northeast on the 20th. The third disturbance was first observed in the west-central portion of the Gulf of Mexico on the 23d. It traveled in a northeasterly direction, moved over northern Florida into the Atlantic Ocean near the Georgia coast, followed the Atlantic seaboard and merged with a low trough over New England on the evening of October 24.

Disturbance of October 10 to 17.—The first evidence of unsettled conditions was noted on the evening of October 10, at which time a cyclonic circulation was centered a short distance to the southwest of Tela, Honduras, with a barometer reading of 29.69 inches. For the next 48 hours, while this depression pursued a north-northwest course, ships in the central and east Gulf regions experienced only moderate east and north winds. At 7 p. m.² of the 12th, the center was located near 25° N. and 90° W. The disturbance recurved to the east-northeast during the evening of October 12. The S. S. *El Estero* at 11 a. m. of October 13, reported a fresh gale from the northeast accompanied by heavy rain, while near latitude 26° N., and longitude 87° W., barometer 29.71 inches. At 1 p. m. of the same day the S. S. *El Isleo* giving her position as 26°05' N. and 87°36' W., reported northeast wind, force 9, the highest thus far reported in connection with this disturbance.

At 6 p. m. of the 14th, the S. S. *Wallace E. Pratt* reported a "calm center" at 25°42' N. and 84°42' W., pressure 29.41 inches, the lowest barometer reading of record in connection with this disturbance. The depression then moved in a northerly direction until the morning of the 15th, when it again recurved, this time toward the west-northwest with an increased progressive movement, causing generally disturbed conditions over the northern Gulf. The center passed inland a short distance to the southwest of Galveston, Tex., at about 7:45 a. m. of October 17.

Extracts from a report by the official in charge at Galveston, Tex., follow:

The course of the storm center and time of crossing the coast lines of Galveston Island and the mainland can be quite definitely established. Wind at the Galveston station and over the western portion of the city veered from northerly to southerly. At the Galveston Municipal Airport, at the San Luis Coast Guard Station, and at Freeport, the wind backed from northeasterly to westerly. Mr. W. D. Stearns, storm warning displayman at Seabrook, Tex., on his way to Galveston at the time, reported strong and increasing northeast winds south of Dickinson, Tex. He also noted the counterclockwise movement of lower clouds and, when nearing

Virginia Point at the mainland end of the causeway at about 8:10 a. m., he encountered a distinct lull for a few minutes with the wind veering sharply to the south and increasing again. At the Fort Crockett Airport, about 3¼ miles southwest of the Weather Bureau the wind velocity record from a single register shows a maximum velocity of 36 miles at 7:11 a. m. and an extreme velocity at the same time of 42 miles, decreasing to 11 miles at 7:44 a. m. and increasing to 26 miles at 8:04 a. m. No automatic record of wind direction is made at Fort Crockett. From the above it is believed that the center of this disturbance, probably not over a few hundred yards in diameter, crossed the coast of Galveston Island at or very near Fort Crockett Airport at about 7:45 a. m., E. S. T., on the 17th and moved toward the mainland near the causeway in a west-northwesterly direction reaching the mainland about 8 a. m., E. S. T. * * * The lowest sea level reading at the Weather Bureau was 29.68 inches about 7:20 a. m. The reading at Fort Crockett at approximately the same time, as shown by the barograph trace, was 29.71 inches. The barograph at Fort Crockett is set to run with a high grade mercurial barometer in that office.

Advisories, including warnings for small craft, were issued from the forecast center at New Orleans on October 12 and at frequent intervals thereafter until the disturbance moved inland on the 17th.

Disturbance of October 17 to 20.—A rather weak cyclonic circulation, possibly not of tropical nature, was charted a short distance to the northeast of Bermuda on the morning of October 17. It moved in a general southwesterly direction toward the Bahama Islands for the succeeding 48 hours. During the 19th it crossed the northern part of Great Abaco Island and over the northeast portion of the Grand Bahama Island. From that point it moved north-westward and was located near 28° N. and 79° W., at 7 a. m. of October 20. The disturbance then recurved to the north and northeast and merged with an extratropical low-pressure trough along the Atlantic coast.

Disturbance of October 23-24.—A very shallow low developed near 24° N. and 93° W. on the morning of October 23. This depression moved northeastward and at 7 p. m. of the same day was centered about 225 miles south of Pensacola, Fla. At the same time, the S. S. *Bertha Brovig* near 26° N. and 89½° W., reported a fresh north-northwest gale, barometer 29.77 inches. Several other vessels in the vicinity reported encountering strong to high winds. During the early morning of the 24th, the disturbance crossed the Florida coast line north of Tampa with a maximum wind velocity of 38 miles an hour at Tampa at 6:45 a. m. During the evening of the 23d and the morning of the 24th, disturbed conditions had overspread the northeast portion of the Gulf of Mexico and the area adjacent to the Georgia and South Carolina coasts. By 7 p. m. of October 24, the disturbance had moved into a trough of low pressure over the New England States.

A succession of accurate advices and warnings was issued from the forecast centers at New Orleans, Jacksonville, and Washington, D. C., covering the progress of this disturbance.

From reports at hand it does not appear that any of these three disturbances developed hurricane force.

No loss of life occurred and but slight property damage was reported in connection with the October disturbances.

¹ The tracks of these disturbances are shown on chart X in this REVIEW.

² Eastern standard time is used in this report.